RIVERWAYS

Newsletter Summer 2000

A Publication of the Riverways Program
Department of Fisheries, Wildlife & Environmental Law Enforcement, David M. Peters, *Commissioner*
Executive Office of Environmental Affairs, Bob Durand, *Secretary* • Argeo Paul Cellucci, *Governor*

Riverways Announces Small Grant Recipients

The Riverways Small Grants Program awarded a total of $50,000 to 13 recipients this spring out of a total of 30 project proposals. These funds will help watershed associations, towns, planning agencies and environmental organizations in their efforts to protect the health of their watersheds, educate the public, provide restoration and expand public access.

This year's projects will focus on a variety of topics including volunteer wetland and macroinvertebrate monitoring, educational seminars and outreach to riverfront landowners, land acquisition and public access, trail projects, riparian planting, fish run restoration, and invasive species removal. Riverways grants are often used to leverage additional funds and services, serving to create a larger project than would be possible with our funding alone. We are pleased to see such a variety of strong projects that we are sure will accomplish wonderful results for conservation and restoration.

The *Upper Charles Conservation Inc*. in Holliston has been awarded **$4,850** for their project in the **Charles River Headwaters Area and Upper Charles Trail Project** off Route 85 in Milford. The grant will be used to hire a professional wetlands scientist to perform a site investigation of the wildlife and vegetation to determine if the area is ecologically significant.

The *Deerfield River Watershed Association* has been awarded **$5,000** for their **Deerfield River Watershed Volunteer Wetland Monitoring Project** in Deerfield and Greenfield. The grant will be used to hire a project manager to train volunteers who will survey riparian wetlands and "call" for amphibians and selected waterbirds to establish what species are dependent upon these marshes.

Dam On the Mill River. The Town of Whately was awarded a small grant for riparian plantings along the river. Photo by Russ Cohen.

INSIDE!!
Riverways Summer 2000 Newsletter

The *Town of Norton's Canoe River Aquifer Advisory Committee* has been awarded a grant of **$3,025** for their **Water Conservation and Lawn Care Seminar**. The seminars will target five communities along the Canoe River (Sharon, Foxborough, Mansfield, Easton and Norton) and be recorded and distributed to local cable stations, libraries, Conservation Commissions, and water departments. These seminars will also incorporate "hands on" model garden demonstrations that will focus on the techniques covered during the presentations.

The *Conservation Commission of the Town of Hardwick* has been awarded a grant of **$5000** for **Ware River Habitat and Public Access**. The grant will be used for partial funding for the acquisition of a parcel of land along the Ware River to expand conservation lands and for passive recreational use.

The *Parker River Clean Water Association* has been awarded **$3,511** for a **River Stewardship: Outreach to Riverfront Homeowners**. The grant will be used to fund house meetings targeting the communities of Newbury, Georgetown, Rowley, Boxford and Newburyport. These meetings will reach out to Parker River water front property owners, present to owners the value of water resources, as well as owner rights and responsibilities, and initiate follow up with the landowners in an attempt to improve the everyday practices that effect the rivers, streams and ponds.

The *Town of Whatley* has been awarded **$3,000** for **Riparian Planting along the Mill River**.

This buffer planting project will be completed following the bioengineering work covered under the s.319 grant. Local citizens will be recruited and educated about the importance of buffer

Continues

Watershed Initiative Update

Round Table Funding Decided for Watershed Teams

Watershed Initiative 101

For those of you who are somewhat "lost in the loop" of endless fiscal year cycles, here is a quick lesson in the Watershed Team Workplan Process. Each fall, each of the 27 Watershed Teams write annual workplans for the following fiscal year (starting July 1). The Teams, comprised of agency representatives and community partners, meet to establish priorities and set goals. Across the state, there are about 540 team members who include: 50% state agency staff, 10% federal agency staff, 10% watershed associations, 10% other non-profit conservation groups, 10% municipal representatives, 10% regional organizations.

The annual work plans are a key instrument in implementing the Massachusetts Watershed Initiative's goal of integrating the environmental activities of all the team members to provide comprehensive watershed protection in each of the 27 major watersheds.

To prepare for these annual workplans, Teams work with both the agency partners and the community partners to come up with major issues in the watershed. To resolve these issues the Watershed Teams develop projects to be completed through three methods: (1) through existing team resources (projects which involve team agency or community partner staff acting in their normal capacity, or volunteer contributions or funding); (2) through existing grant programs where funding can be directed to the problems identified; and (3) through projects that could be funded through the EOEA "Roundtable" process.

Watershed Team's issues are specific to conditions in the watershed and these concerns include lack of water quality data, inadequate flow or flow data, the need to protect habitat and open space, and desire to restore fishways.

Examples of projects that can be completed with existing resources include creation of a Team Subcommittee to review NPDES permits (SuAsCo), working to encourage partners to apply for a DEM Lakes and Ponds grant to improve conditions on a local pond (Buzzards Bay), and facilitating public meetings during the year and other outreach (Nashua).

Patricia Kurkul, Regional Administrator of the National Marine Fisheries Service hands a net to Paul Diodati, Director of the Division of Marine Fisheries to celebrate the last transfer of river herring up the Town Brook in Plymouth. Photo by Bob Greco.

For large projects, Watershed Teams have sought grant money (such as S.319 funds through the Clean Water Act), working with partners – such as the Army Corps and the USGS – to provide services and applying for funds from the Watershed Initiative Round Table.

Examples of Round Table proposals include development of a basin-wide water quality strategy (Boston Harbor), restoration of degraded ecosystem (Deerfield), and determination of PCB loads

***Small Grants*, continued from page 1**

zones, and the volunteers will assist in the actual plantings in the late spring and early summer.

The *North and South Rivers Watershed Association* has been awarded **$4,565.10** for a **North River Macroinvertebrate Study** in Plymouth County. The group will assess the biological and physical condition of tributary streams throughout the North River Basin.

The *Town of Plymouth* has been awarded **$5,000** as part of the **Town Brook Fish Run Restoration**. The town will restore an anadromous fish run by replacing a defunct fish passage and removal of the Billington St. dam.

The *Massachusetts Audubon Society* has been awarded **$4,309** for a **Little River Alewife Count** in Gloucester. The grant will be used to monitor the health of the alewife fishery, foster stewardship of the Little River through education, provide baseline data for municipal fishery management, and determine ways to improve fisheries.

The *Merrimack River Watershed Council* has been awarded **$2,450** for the **Cobblers Brook Greenway Revitalization Project**. The Council will be revitalizing the Cobbler's Brook Greenway in the town of Merrimack by increasing awareness, enhancing and restoring the Greenway to both protect flow and encourage recreational use.

The *Wildlands Trust of Southeastern Massachusetts* has been awarded **$3,858** for a **Riverfront Landowner Outreach Effort**. The grant will be used to do follow-up work and contact riverfront landowners along the upper Taunton River in the focus communities of Bridgewater, Middleboro, and Raynham.

Franklin, Hampden, and Hampshire Conservation Districts have been awarded **$4,000** for their **Water Chestnut Inspection and Eradication Program** for the Connecticut River Watershed. The districts will be developing a volunteer system where all water bodies are inspected and water chestnut plants are located and removed before infestation occurs.

The *Coes and Patches Ponds Watershed Association* has been awarded **$1,300** for their **Outreach Plan for the Tatnuck Brook Watershed** in Worcester. The group will focus on developing an outreach plan, producing a quarterly newsletter, producing public service announcements, revising their trail brochure, and educating students and residents to be watershed stewards.

and coring of depositional zones (Millers). Ideally, the proposals come out of a complementary process that brings together the collective insight and knowledge of agencies and communities, non-governmental organizations, regional planning agencies and businesses.

In the late fall, Teams present the priority projects that require Roundtable funding to the EOEA. During the winter, the Watershed Initiative Manager and his staff review the work plans for inclusion in a report that is shared with the agencies following review by the "Inter-agency Watershed" Liaison Committee (which has representation from each of the EOEA agencies — Departments of Food and Agriculture, Environmental Management, Environmental Protection, Fisheries, Wildlife and Environmental Law Enforcement and EOEA itself. Riverways Programs staff represent DFWELE.) Each of the projects is directed to a lead agency with supporting partners also named.

This Inter-agency committee serves as a reality check by looking at each work plan in light of (1) appropriateness for agency involvement, (2) ensuring that projects are consistent with the mission of the lead agency, (3) considering whether other funding may be more appropriate, and (4) past experience of successes in similar projects in other years. This review results in a list that is discussed with each agency, sometimes modified, and then given to the Interagency Roundtable.

The Roundtable was established to coordinate resource allocation for the Watershed Initiative and to involve the EOEA agencies. This process allows agencies to participate through funding and/or staff with projects that have been identified as priorities by the teams. The Roundtable, led by EOEA Secretary Bob Durand, consists of EOEA Agency Commissioners, Directors of the EOEA Office of Technical Assistance, Coastal Zone Management, Division of Conservation Services as well as three community partners selected by the Watershed Initiative Steering Committee (WISC): the Massachusetts Watershed Coalition, the Merrimack River Watershed Council and Billman-Golemme Associates. Information about the Watershed Teams is presented by Bob O'Connor, Director of Watersheds and Land Policy.

Staff Changes at EOEA

Bob O'Connor, Director of Watersheds and Land Policy, will be overseeing the work of the Watershed Initiative and land protection at EOEA.

Karl Honkonen, former Buzzards Bay Team Leader, is now Watershed Manager, replacing Bob O'Connor. Karl oversees and supports the work of the twenty Watershed Team Leaders in twenty seven Massachusetts watersheds, and coordinates EOEA agency support and support staff for the Watershed Initiative.

Ole Amundsen has been hired as the new Land Policy Coordinator at EOEA and will be working closely with Bob O'Connor on land protection issues. He will be helping EOEA strive to meet the goal of protecting 200,000 acres of land by supporting the coordination of state, municipal, and nonprofit land acquisition a well as identifying priority lands for protection. Most recently, Ole worked for Sudbury Valley Trustees (SVT), a regional land trust, as a conservation planner. While at SVT he produced a Greenways Plan for the SuAsCo Watershed and analyzed focus areas to guide SVT's proactive land acquisition strategy.

This coming year, FY2001, the workplan priority projects fell in to several broad categories.

- Determining the Source of Water Impairment
- Stormwater Management
- Open Space Planning and Protection
- Volunteer Water Monitoring
- Determining Adequate Streamflow to Protect Biodiversity
- Ecological Assessment and Restoration
- Drinking Water Source Assessment and Protection
- Hydrologic analysis of the water resources
- Watershed Education and Outreach
- Comprehensive Watershed Assessment and Planning
- Fishway Restoration and Dam Removal

Completion this year of the third Round Table means that the Watershed Initiative has crossed the 8.5 million dollar mark for projects that teams have advocated for since the Round Table process began.

Examples of Round Table Projects with DFWELE as the Lead Agency

The South Coastal Watershed Team has been awarded FY2001 Round Table moneys for dam removal on Town Brook in Plymouth. Members of the River Restore Partnership gathered on Friday, May 5, at the Jenny Grist Mill on Spring Street in Plymouth to celebrate the last transfer of river herring from Town Brook into their spawning grounds upstream in Billington Sea. The Partnership plans to remove the Billington Street Dam and construct a new fishway at the Newfield Street Dam this fall. The $150,000 project will allow portions of Town Brook to flow freely for the first time since before 1800.

This project is also being supported by a Riverways Small Grant, as well as by other partners, including Coastal Zone Management, Division of Marine Fisheries, National Marine Fisheries Service, Fish America Foundation, US Fish and Wildlife Service, National Fish and Wildlife Foundation, Natural Resources Conservation Services, Environmental Protection Agency, Army Corps of Engineers, EOEA, DFWELE, Riverways Programs-River Restore Program, Department of Environmental Management, Town of Plymouth and Milone and MacBroom, Consulting Engineers.

Another approved Roundtable project, proposed by the French and Quinebaug Watershed Team, will address an issue critical to dam removal: sediment quality. It will include sampling and analysis of sediments impounded by dams in the French and Quinebaug Rivers.

Dams are not the only barriers facing fish looking to migrate or move up and downstream. Culverts can create conditions that block fish movement by having too large a drop on either end or water too shallow or too fast to swim through. The Connecticut Watershed Team's Round Table project is to assess these barriers and potential solutions. Roundtable moneys will support fishery enhancement at the Palmer River and other Mount Hope Bay rivers, and installation of fish passageways for FY00-01 projects.

The Watershed Initiative Round Table also approved regional and statewide projects. Recognizing the important role that Stream Teams play locally in the Watershed Initiative, the Roundtable continues to provide funding for Stream Team organizing through the Riverways Programs.

Massachusetts Watershed Initiative
Steering Committee Presents Final Recommendations to Secretary Durand

The WISC Progress Evaluation Subcommittee found very strong enthusiasm for the goals of the Massachusetts Watershed Initiative, as summarized in its report on the MWI survey. Based upon the survey results, and also taking current developments and dialogues into account, the Subcommittee asked the WISC to forward the following recommendations to the Secretary and his staff.

At its meeting on January 19, 2000, the WISC voted to accept the report of the MWI Progress Review Subcommittee and, from that report, prepare and present recommended actions for the Secretary and staff. For the purposes of this report, the WISC defines the Massachusetts Watershed Initiative and the Watershed Teams as a partnership among state and federal agencies, municipal governments, regional planning agencies, watershed associations and other conservation organizations, and businesses. Although each team is lead by an EOEA Team Leader, there is significant participation, leadership and ownership that come from other participants.

WISC RECOMMENDATIONS

POLICY AND LEADERSHIP

- Continue to support the Massachusetts Watershed Initiative and its full implementation through the Watershed Teams and community partners.

- Implement a funding strategy to support effective state agency participation, comprehensive watershed assessment and building capacity for active community partners in the MWI. Assure continued funding for the MWI through agency operations budgets, "Roundtable" allocations and agency grant programs.

- Establish clear linkages between community preservation, planning for growth, biological conservation and ecosystem protection, pollution prevention, environmental education and the MWI. Establish Team Leaders as the primary community liaison for these important initiatives.

- Strengthen role of Teams and Community Councils in local and state permitting and regulatory decisions. Team Leaders must have ability to integrate agency reviews and approvals. Examples of relevant decisions are major development proposals, and changes in land use or water management which will have significant impacts on allocations, discharges, pollution levels or instream flow management.

SUPPORT FOR TEAMS AND MWI PROCESS AND IMPLEMENTATION

A. Support for Teams and Community Partners

1. Increase administrative support available to Teams and Team Leaders.

2. Continue educational support programs for Team Leaders and other Team participants in crucial areas including Team building, publicity and outreach, and facilitation. Seek additional funding to develop programs to cross-train with watershed associations and other community partners.

3. Hold regular community forums for Watershed Teams to share success stories, problem solve, attract new partners, and plan for the future.

4. Continue funding support for projects and capacity building of community partners, including grant programs for increasing business and municipal partners through Community Councils and other measures.

B. Support for MWI Process/Implementation

1. Fund implementation of a comprehensive Watershed Initiative outreach and education program to expand participation by businesses, municipal officials and other stakeholders.

2. Require timely completion of comprehensive watershed assessments and five year Watershed Action Plans by Teams, participating agencies and community partners.

3. Develop a report card for the MWI that highlights Team and community partner accomplishments and environmental improvements. Arrange presentations by Teams to the Secretary and key EOEA leaders, Agency Commissioners and the WISC. Team presentations can be scheduled for selected WISC meetings with each Team discussing their top five environmental issues and activities to address these issues.

Members of the Deerfield Watershed Team on the South River in Conway. Photo by Amy Singler.

Urban Rivers Update

Bridge on the Westfield River. Riverways awarded an urban grant to Westfield for their Riverfront Revitalization Project for the downtown riverfront area. Photo by Mark Noonan.

URBAN RIVERS PRESENTS SMALL GRANT AWARDS

The Urban Rivers Program has just awarded a total of $50,000 to urban communities for their work towards reconnecting with their urban rivers. The goal of the Urban Rivers Program is to involve more people from urban communities in activities that embrace their rivers as well as develop an understanding of the environmental and public health issues connected to their river. Another goal is to improve the water quality and habitat along urban rivers. The Program acts as an information clearinghouse and provides technical, financial and other support to community efforts for urban river revitalization. This years grant awards were given to communities working on the following topics:

REVITALIZATION OF URBAN RIVERFRONTS

On the Westfield River – The City of Westfield has been awarded $9,040.00 to assist in Phase II of the Westfield Riverfront Revitalization Project. Riverways provided funding in fiscal year 1998 for Phase I for the design and planning of the Project, focusing on the river as both a key part of downtown economic growth and the river as a recreational asset. This year's grant will support the private/public partnership in implementing the Revitalization Project and developing an action manual. The manual will guide community groups and partners in steps toward accomplishing the goals of the Riverfront Revitalization for the downtown riverfront area.

On the Neponset River – The Town of Milton has been awarded $4,630.00 to perform a traffic count as part of a feasibility study for a multiuse path bordering Gulliver's Creek. This project is designed to increase the recreational potential along the Neponset River Greenway by promoting the creation of a multiuse bikeway corridor along Granite Avenue connecting the estuary, the River and the residents of Dorchester and Milton.

NEIGHBORHOOD PARTICIPATION

On the Connecticut River – The City of Springfield has been awarded $10,000.00 to support *River in the City*, the public education and art installation project along the Connecticut River. The grant involves both high school and college students working together to explore environmental issues, past and present, affecting the City and the River. Local advocates and artists will work with students on a mural designed to share their vision with the entire community and encourage people to visit and enjoy the park along the River near the Baseball Hall of Fame.

On the Mystic River – The City of Somerville has been awarded $10,000.00 to assist in the city's summer art events based on the theme of the Mystic River. Windows Art Project invites local artists to display their visions of the Mystic River in local storefronts. ArtBeat Festival will "bring the Mystic River to Davis Square" as well as provide maps for the festival goers showing access points to the river. Art Without Walls will bring together students and muralists to create a mural panels connecting the underpass opening along the Mystic River.

On the Merrimack River – The City of Lowell Division of Neighborhood Services has been awarded $10,000.00 to assist in the completion of an ADA compliant pedestrian access way in the Centralville neighborhood. This project will continue the City's efforts to make the Merrimack River handicap accessible and available to everyone.

RESTORATION OF FISHERIES AND WATER QUALITY

On the Merrimack River - The City of Lowell Tsongas Industrial History Center, together with the Regional Wastewater Utility, has been awarded $5,184.00 to support *Water Under Fire*, an environmental history program involving water quality on the Merrimack River. Students will participate in this program as part of the ninth grade curriculum, and will go out on the river to test water quality and learn more about aquatic habitat and fisheries.

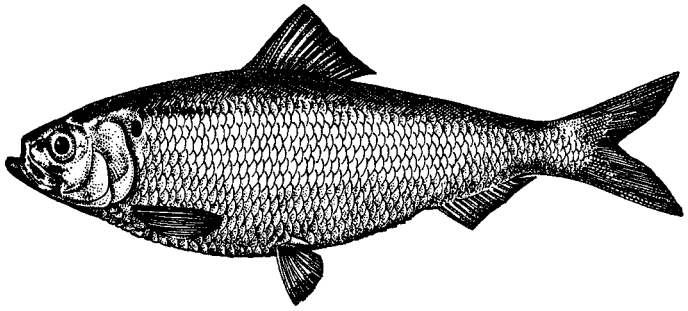
Use our New Tally Cards for Your Next Clean Up

What have you found when you clean up your stretch of stream? Do particular areas have different types of trash? If you would like to keep track of what you are finding and have that information used by others as well, we have a new card for you. The Massachusetts Watershed Coalition, the Massachusetts Riverways Programs and Massachusetts Community Water Watch/MassPirg have partnered to create tally cards that help you monitor and count the types of trash you are finding during your cleanups.

These cards are designed as a way for groups to see trends in what they are finding and to compare sections. The results can be used as an outreach tool to encourage steps that reduce trash at its source. The information can be used to leverage grant money, get donations of trash bags, gloves, etc. or encourage communities to install receptacles or signs in critical places. Data can also add more substance to press releases, can be a valuable tool in the classroom (example: learning percentages, weight/volume calculations), or can be used to target specific trash sources.

The cards are designed to be mailed directly to the Massachusetts Watershed Coalition so that the data can be used for outreach across the state. If you would like more information, or tally cards for your next cleanup, contact the Massachusetts Watershed Coalition at 978-534-0379.

Fishway Stewardship



Have You Seen This Fish?

Parker River

Volunteers on the Parker, Ipswich and Little Rivers were busy this spring counting returning adult alewives as they swim upstream to ascend fishways from Gloucester to Georgetown. This is the fourth year of the Parker River fish count, once again organized by the Parker River Clean Water Association in cooperation with the Essex County Sportsmens Association. This year about 50 people volunteered and an estimated 1,200 fish were seen making their way past the first fish ladder. The number of fish actually viewed at the fish ladder is a percentage of the total population that makes it through. The count numbers are then used to estimate the total population. In 1999, the fish count tallied a record return of 7,695 fish.

Parker River alewives have six fishways to navigate on their way to spawning grounds in Pentucket Pond. Recent fishway repairs by the Sportsmens Association have kept several fishways functioning despite their age – many were built by the Works Progress Administration in the 1930's. Repairs to the Pentucket Pond dam, including a new fishway, were completed just prior to the start of this year's fish run. The Parker River fish count runs from April 10 through May 14. For information call Rob Stevenson at 978-462-2551 or check out www.parker-river.org

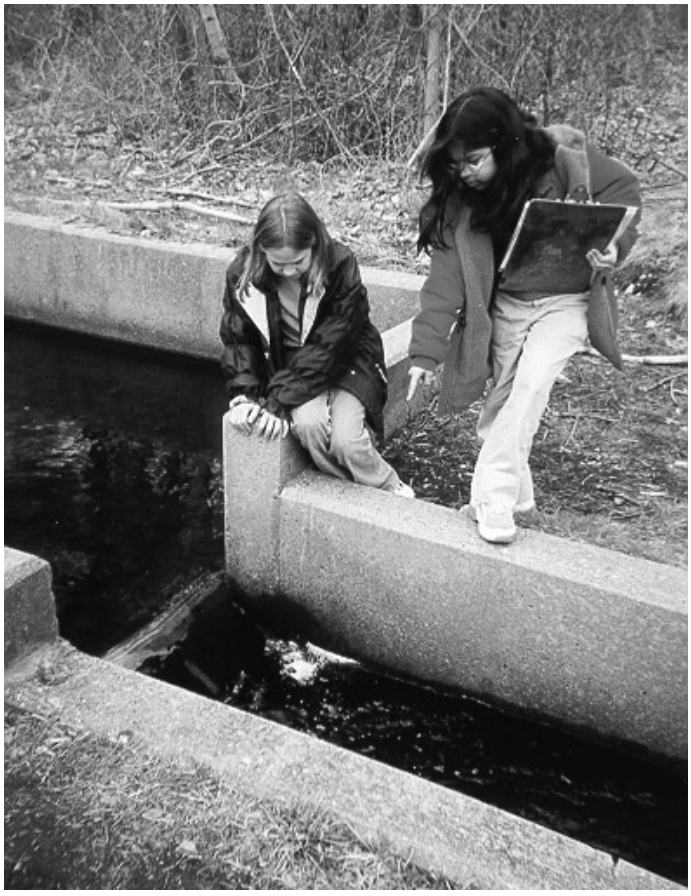
Ipswich River

The Ipswich River once supported a thriving alewife fishery as well. Construction of mill dams and development of water supplies limited access to spawning ponds and, ultimately, the fish population. The Massachusetts Division of Marine Fisheries has stocked adult blueback herring, which spawn in flowing waters, in the mainstem Ipswich through the 1990's.

Last year, the Ipswich River Watershed Association organized the first "fish watch" to see if bluebacks were returning to use the new fishway at the Sylvania Dam in Ipswich which was completed in 1997. Seventy-five volunteers kept careful watch and noted small numbers of returning fish. This year, IRWA is seeking to conduct counts more often during the weeks from April 24 – May 30. For more information, contact Daniele Lantagne at 978-887-8404.

Little River

Alewife runs up and down the Massachusetts coast arrived earlier than expected this year and the Little River in Gloucester is no exception. Repairs on the two fishways that provide alewives access to their spawning grounds in Lily Pond were completed at the end of March. According to Vicky Boundy of the Merrimack Valley Planning Commission, "no sooner did the new Denil fish ladder go in, then the fish started a' runnin'."



Two of the fifty volunteer "fish counters" observing migrating alewives in the Little River in Gloucester. Photo by Vicky Boundy.

Volunteers are counting fish from April 1 – May 27 in this first year effort, coordinated by Massachusetts Audubon/North Shore in cooperation with Eight Towns and the Bay and the City of Gloucester. Staffing and outreach for this project are supported by a Riverways Small Grant.

Fishway repairs on the Little River were funded by the Environmental Protection Agency through the Mass Bays Program and were implemented under the direction of the Massachusetts Division of Marine Fisheries. The new Denil fishway at Lily Pond was constructed by the Gloucester High School carpentry shop with plans provided by DMF.

This year's attention on the Little River is a tribute to the years of stewardship and dedication of Robert "Stubby" Knowles, Gloucester shellfish and herring warden, who has watched over this run and kept fish passing upstream against all the odds. Dave Sargent of Eight Towns and the Bay has also been a long-term supporter of the fish run on the Little River.

All fish counts in the Northeast involve members of the Great Marsh Anadromous Fish Team, facilitated by Mass Audubon/ North Shore. Riverways is an active member of this Team and Small Grants have funded many projects in these coastal watersheds. The Team is looking for legislative support to fund an aquatic biologist at DMF to oversee Northeast fish runs and guide volunteer efforts.

Each year, public interest in observing their local fish run grows. The commitment of fish counters extends far beyond these spring weeks when fish are moving upstream – the experience becomes part of ongoing community stewardship of a shared coastal heritage.

Help is Here: Volunteer Monitoring Gets a Boost

Volunteer-based monitoring grows almost daily. Groups across the state have taken on the challenge of monitoring rivers, lakes, wetlands, and more. Initiating and sustaining a monitoring program is a challenge regardless of the effort, enthusiasm and expertise in an organization. Fortunately the Executive Office of Environmental Affairs embraces the potential of volunteer-based monitoring while recognizing some of the hurdles facing groups.

Through the Watershed Initiative, funding has been awarded to seven organizations to serve as Regional Monitoring Support Centers (MSC) for volunteer monitoring groups across the Commonwealth. Volunteer monitoring now has a network of support available with a range of geographic focus and talents.

Many watershed-based groups had the good fortune to meet with their regional support center staff last spring when each MSC held an introductory meeting(s). Some groups had the pleasure of completing a lengthy questionnaire about the group's needs, progress, and general feelings about volunteer monitoring. Thanks to the information provided by the returned surveys, the MSCs and EOEA have been able to determine the most pressing needs of volunteer groups. The MSCs can now better tailor their energies to help volunteer monitors.

In addition to funding the MSCs, EOEA has provided grants for equipment and other monitoring needs to nonprofit groups monitoring rivers, lakes, wetlands, etc. With all the great work going on around the state, it is safe to infer that money going to support volunteer based monitoring provides a great return and will help improve the health of our watersheds.

Monitoring Support Centers offer expertise, advice, training and select services. The specifics of the MSC network are still evolving. Currently there are two categories of MSCs, those that serve a cluster of watersheds and others that contribute select technical assistance state-wide (see the accompanying list).

A regional MSC can help a monitoring program in many ways including help with starting a program or refining an existing monitoring initiative. As volunteer monitoring grows in sophistication and goals are broadened, MSCs can help a group keep pace with expectations and requirements. From helping a group write a Quality Assurance Project Plan (which is now required before a group can receive state or EPA monitoring grants) to improving quality control for the production of more accurate data, the support centers can provide expertise.

Most of the MSCs have their own well-established monitoring programs and can offer advice from experience. They also have access to other MSCs to make full use of specialty services and networking opportunities. The concept of an MSC network is exciting with real potential for strengthening all volunteer-based endeavors. This valuable resource should be used and useful for all monitoring progams. More information is available at www.umass.edu\tei\mwwp\msc.html or by calling a service center or Riverways, (which is still available for advice, training, and assistance, too).

Regional Monitoring Service Centers:

Charles River Watershed Association, 617-965-5975
Watersheds Served: Boston Harbor/Mystic, Charles River, Ipswich, & North Coastal.

Massachusetts Water Watch Partnership, 413-545-5531
Watersheds served: Connecticut River, Chicopee River, Westfield River, Millers River, Deerfield River, Hoosic River and Housatonic River.

Urban Harbors Institute at UMASS Boston, 617-287-5570
Watersheds served: Buzzards Bay, Taunton River, & South Coastal.

Volunteer Monitoring Environmental Network, (Laura Mattei) 978-681-5777 x20
Watersheds served: Merrimack River, Nashua River, Shawsheen River, SuAsCo Rivers, Parker River.

Waquoit Bay National Estuarine Research Reserve, 508-457-0495
Watersheds served: Cape Cod and the Islands, Buzzards Bay

Technical Assistance Monitoring Service Centers:

Environmental Analyses Laboratory at UMASS-Amherst, (Peter Kerr) 413-545-2936
Serves the entire state offering:

Quality control program for pH, ANC, and DO
Water sample analysis for total Phosphorus and Chlorophyll
Metals analysis
Chemical analysis advice
Fecal coliform analysis is coming

UMass Ext. Natural Resources Environmental Conservation, (Anna Hicks) 413-545-1884
Serves the entire state offering training in aquatic invertebrate sampling, advice and follow-up.

Adopt Riverways for a Day: Riverways Programs Seek Help During the Big Move

The Riverways Programs will be leaving the Saltonstall building on July 7TH. Our new office location will be on the 4TH floor at 251 Causeway Street at the corner of North Washington and Causeway Streets, very close to the bridge over the Charles River as it enters the inner harbor between the North End and Charlestown. We do not know when the space at Causeway Street will be emptied, renovated and ready for us to move in. We will have a table with a few computers for our use at the present offices of the Division of Environmental Law Enforcement at 190 Portland Street across from North Station/ Fleet Center during the interim time, but will mostly be working from home and on the road.

In the meantime, we are looking for invitations for the Riverways staff to spend a day in other offices. Once or twice a month we would like to use a conference room in different organizations. We would take part of the day to meet with host staff and share information and project expertise; we would use the rest of the day to hold our Riverways staff meeting and follow up staff conferences. So far we have an invitation from the Merrimack River Watershed Council to share the conference room in their new quarters at 181 Canal Street in Lawrence. Other invitations are welcome!

North Shore Farmers Work for Water Quality

Submitted by Dan Lenthall

District Conservationist

USDA Natural Resources Conservation Service

Farmers throughout the north shore are busy creating plans and building structures to improve the quality of runoff from their farms. The quality of Essex County rivers and coastal areas is a topic of concern for many groups and agencies. This message is spread by many organizations through meetings, workshops and newsletters. It requires action at many levels to effectively make improvements to the quality of the local environment. Area farmers do their part too as good stewards of the land.

Improved sewer treatment plants started the water quality improvement process in the 1970's. The treatment plants addressed many of the "point source" pollution problems; contaminated water coming from a defined location or point. Today, "non-point pollution" is the largest contributor of contaminates. "Non-point pollution" is runoff from the land. It comes from a variety of sources and must be addressed by variety of methods.

Road runoff, storm sewers, and urban runoff are considered the greatest threat to the quality of our water. These issues require coordinated effort among businesses, landowners, and government officials. Farmers, on the other hand, generally own or control the land they use, making improvements a matter of commitment, economics, and technical expertise.

Several conservation practices are key water quality practices. Improved pest and nutrient management are increasingly important to environmental quality and farm operations. Careful attention to insect populations and established thresholds provide farmers the tools to decide if treatment is needed, whether biological controls will be effective or treatment can be delayed. Integrated pest management procedures improve the effectiveness of pest management and can lead to reduced chemical use.

Soil nutrients are the raw materials for crop production. Excess amounts affect water quality through runoff and potential leaching. Soil tests, soil nitrate tests, manure analyses, and compost analyses all improve the management and amendment of soil nutrients. Several years ago, pest monitoring and detailed soil tests were improved technology, today they are commonplace in the agricultural community. Individual homeowners can learn lessons from our farmers when managing their lawns.

Water runoff is the primary carrier of non-point source pollution. Slowing, filtering, infiltrating, and temporarily detaining runoff from the land are primary means of treating water runoff. Although somewhat simple in concept, the reality is that there is often little room to accomplish these tasks on many farms. Farms, especially livestock farms, were located near streams as a water supply for the stock. Several generations later, the operation and buildings are in the same place. "Squeezing in" water quality practices to address the runoff takes time, thought and planning.

In a housing development, one of the first steps is to install a drainage system. Unfortunately, the philosophy is to capture all the runoff and remove it as quickly as possible through catch basins and pipes. On the farm, farmers take an opposite approach: to capture only the "dirty" water, and divert the clean water. Earthen basins, grassed lined waterways, grassed filter areas, and water diversions combine to capture and slowly release the runoff where vegetation and biological processes improve the quality.

In subdivisions, the cost of the drainage system is shared among all the homeowners as part of the sale price, and maintained by the town after acceptance. On the farm, the initial cost, operation and maintenance are the responsibility of the farmer. A strong willingness to make changes and sound economics are needed to develop effective water quality projects.

Essex County farmers have been able to take advantage of several state and federal programs the past few years to offset some of the costs of water quality improvement. The Massachusetts Agricultural Environmental Enhancement Program, USDA Environmental Quality Incentives Program, and in some instances Massachusetts Coastal Zone Management have joined to provide funding for on-farm water quality projects.

By reducing the economic burden, farmers are more willing to exercise their conservation ethic without jeopardizing the financial viability of their operation. Slow, steady improvements in the water quality take place on the landscape as each segment of the community does its part in the watershed.

Coming Soon! Public Access to the Waters of Massachusetts

In partnership with DFWELE's Public Access Board, Riverways is assisting in the compilation of an updated edition of ***Public Access to the Waters of Massachusetts***. The revised edition includes 88 color maps of the states' most popular sites, and catalogues more than one hundred smaller public access sites. Sites exist in every corner of the state providing freshwater and coastal access. The publication will be available this summer.

Car top access site on the Millers River in Orange. Photo by Russ Cohen.

Well-deserved Attention to Under-served Communities

Trash and medical waste incinerators line the Merrimack River, oil tank farms are perched on Chelsea Creek, and electricity generating plants are slated to grace many urban rivers. Asthma, cancer and other health problems appear in dramatic clusters in many of our urban communities. For decades urban areas were the forgotten child of the environmental renaissance but things are slowly reversing. Urban areas are no longer labeled hopeless asphalt wastelands and the environmental justice (EJ) concept is growing.

Recently the Executive Office of Environmental Affairs created a new position, hiring veteran environmental activist Veronica Eady as Environmental Justice and Brownfields Program Director to initiate within the state a dedicated focus on the many issues surrounding environmental justice. The thrust of this new program will be to fashion a state framework on environmental justice and public health issues.

To accomplish this, state agencies must be brought together to assess what is currently in place and what gaps exist so progress will happen. There are definite challenges, starting with a lack of a definition for environmental justice communities. Fortunately all of the agencies under the EOEA umbrella are coming together, enthusiastically, to work on this program. The objectives of this program are broad; from defining what constitutes an "environmental justice community" to gathering information - including mapping pollution source clusters across the state.

The backbone of this program is expected to be an advisory group comprised of representatives from many state agencies along with community and environmental justice advocates. The plan is to solicit priority concerns from people in environmental justice communities to learn their priorities. These information-gathering efforts will be used to create the work plan for the Environmental Justice and Brownfields Program. No question, there certainly are many pressing issues in the environmental justice realm.

The mapping part of this program may be one of the most visible of its initial efforts. Throughout the state, geographic concentrations of large pollution sources exist including incinerators, power plants, landfills, major transportation routes, etc. Creating a map which incorporates several different parameters could produce a big picture look at the intersection of pollution sources, health problems and EJ communities. The visual representation of this information will help EOEA develop policy and target resources with an EJ twist. Presumably this information will help EOEA agencies support environmental justice objectives within their existing programs, too.

Eventually a draft Environmental Justice Policy or Executive Order will be crafted. This draft may include a set of environmental justice indicators to assist in defining or identifying environmental justice issues. The initial strategy may include pilot projects or studies to assess cumulative impacts, transportation issues, or compliance to federal law. All these efforts are meant to enhance the Commonwealth's responsiveness to environmental issues in EJ areas.

Adopt a Stream

Adopt-A-Stream Prepares for Summer Work

Adopt-A-Stream is working with several new teams this summer. The Mill Brook Task Force has completed the training workshop and Shoreline Survey in Concord. The Task Force includes abutters, long-time observers of the brook, new residents, members of Concord's tracking association and is sponsored by the Concord Natural Resources Commission. This group is the first to try out our newly updated data sheets with new wildlife questions developed with help from the Natural Resources Conservation Service. In addition, the team created a supplemental sheet with a cross section to be used to get detailed information on land use and land cover.

Adopt-A-Stream also met with the First Herring Brook Initiative, a group dedicated to protecting the brook and Scituate's water supply to help plan their survey. As part of this project, Dr. Tomay's environmental science class is surveying a segment of the brook this spring. The Friends of the Alewife Reservation conducted their Shoreline Survey on June 3. This new friends group is working closely with the MDC, owners of the reservation, the City of Cambridge, the towns of Arlington and Belmont, residents, MA Community Waterwatch, and brook naturalists and advocates to gather baseline data about the brook, to encourage citizens to use the brook, and to determine restoration and enhancement actions.

The Fitchburg Stream Team will receive its award on June 17TH in a ceremony with Marion Stoddard, founder of the Nashua River Watershed Association, town representatives of Fitchburg and other residents. The Stream Team has been particularly active and is working to protect the Nashua River through clean ups, educational walks, and by meeting with the Army Corps of Engineers on their flood restoration project. Stream Teams in the Housatonic Vally have also been active. Adopt-A-Stream staff recently held a training workshop for the Lee Stream Team and presented the East Branch Stream Team with an Adopt-A-Stream award.

In other exciting news, the Reading/North Reading Stream Team received a Technical Assistance Grant (TAG) from the Massachusetts Department of Environmental Protection (DEP) for $10,000 for their ongoing 21E site work. The grant will allow the team to hire a consultant to provide technical expertise as well as to develop educational materials for the public to help increase their understanding of and involvement in site cleanup activities. Please let us know soon if you would like us to work with your group this summer or next fall.

Riverways Staff: *Pictured from left to right: Patricia Sheppard, Cindy DelPapa, Joan Kimball, Karen Pelto, Maria VanDusen, Amy Singler, Rachel Calabro, Russ Cohen. Photo by Judy Wagner.*

Meet the Staff

Maria Van Dusen, *Riverways Coordinator*: Provides oversight for all aspects of Riverways' activities and staff, arranges all grants and cooperative agreements with other state and federal agencies; serves on the Westfield Wild and Scenic River Committee representing the Commonwealth; represents DFWELE on EOEA committees relating to the Watershed Initiative, serves on the Management Committee of the Mass Bays Program and the Executive Committee of the Boston Urban Rivers Partnership. Also represents Massachusetts River interests in several New England regional boards. Represents the Department of Fisheries, Wildlife and Environmental Law Enforcement on the Chicopee River, Deerfield River, Farmington River, Shawsheen River, Merrimack River, Westfield River and North Coastal Watershed Teams.

Joan Kimball, *Adopt-A-Stream Coordinator*: Coordinates the Adopt-A-Stream Program which currently works with over 70 groups across the state. Provides technical assistance on Stream Team formation, Shoreline Survey training, action planning and assistance in implementing action plans and on local river protection bylaws. Coordinates "Train the Trainers" groups throughout the state. Represents DFWELE on EOEA committees relating to natural valley storage and the Watershed Initiative. Represents the Commonwealth on the SuAsCo Wild and Scenic River Study Committee, represents the Department on the Boston Harbor, Taunton River, Buzzards Bay, and SuAsCo Rivers Watershed Teams.

Russell Cohen, *Rivers Advocate*: Coordinates the legislative, policymaking, riparian land protection and other legal work of the Program. Provides assistance with the identification, protection and stewardship of riparian lands. Serves as Riverways' primary specialist on the legal aspects of instream flow protection. Other duties and responsibilities include reviewing proposed development projects and grant proposals involving rivers, riparian areas; assisting with establishing and publicizing public access to and/or along rivers, and serving as the Program's representative for the Blackstone, French/Quinebaug, Hudson (Hoosic), Housatonic and Connecticut Watershed Teams.

Karen Pelto, *Stream Ecologist*: Coordinates River Restore, a program to assist EOEA and its agencies in improving fish movement and passage through the evaluation and removal of instream obstacles, particularly dams. Provides scientific and other technical assistance for instream flow, fishway stewardship, and water quality standards. Represents the Department on the Parker River, Ipswich River and Cape Cod Watershed Teams.

Cindy DelPapa, *Stream Ecologist*: Provides the public with information about water quality issues including water monitoring, NPDES point source discharge permits, Phase II stormwater permits, and nonpoint sources of pollution. Trains groups in monitoring for pollution sources, provides technical advice and informational workshops, and assistance in initiating new programs or investigations of water quality issues. Represents the Department on the Nashua River, Millers River, and Narragansett/Mount Hope Bays Watershed Teams.

Liz Mikulecky, *Westfield River Wild and Scenic River Coordinator*: Explores protection measures under existing state programs that could be used to protect the designated segments of the Westfield River. Assists state and regional organizations/agencies in presenting information to town officials, landowners, and the general public on the values of the Wild & Scenic River segments and ways to enhance these areas and prevent impacts of degrading activities. Works with state and regional agencies, towns, and land trusts on update of Open Space Plans and in evaluation of parcels that are key for further development of a protected riparian greenway in the designated segments.

Patricia Sheppard, *Grants Administrator*: Oversees all aspects of grant process; drafting RFR's, announcing grants, conducting grant review, and administering grants. Monitors cooperative agreements between Riverways and other state and federal agencies; manages contracts and budgets; assists staff in field; responsible for accounting, fiscal year spending and MMARS work. Oversees internship program.

Uma Mirani, *Urban Rivers Assistant*: Provides organizational and technical support to community efforts for urban river revitalization; provides information on stormwater technology, nonpoint source pollution, greening of brownfields, and daylighting of buried streams. Special emphasis is on continuing the work to revitalize Mill Creek and Chelsea Creek and their pilot restoration site.

Rachel Calabro, *Technical Assistant*: Provides technical assistance to watershed groups and Stream Teams who have completed Shoreline Survey Action Plans. Assists groups in finding partners to implement river protection strategies. Provides support for Adopt-A-Stream/Riverways and MA GIS staff to incorporate Stream Team data into the GIS system, maintains Riverways' webpage, and edits the Riverways newsletter. Represents the Department on the Charles River and Ten Mile River Watershed Teams.

Amy Singler, *Stream Team Organizer*: Provides outreach to watershed groups and others to target Stream Team groups who want to do Shoreline Surveys and assist them in involving municipal officials and planning for field surveys. Assists in Shoreline Survey training sessions at meetings sponsored by local Stream Teams or watershed groups, and in conducting priority setting and action planning meetings following the Shoreline Surveys. Assists Riverways Programs staff in gathering and/or producing materials that will aid Stream Teams and town officials in Shoreline Surveys and in implementation of action plans and edits the Adopt-A-Stream newsletter. **And, a special thanks to…**

Ann Greaney, *River Restore and Fishway Stewardship Assistant*: Ann will be leaving us at the end of May for work at Harvard, so we would like to thank her for all her work with the River Restore program. Ann provided assistance to Karen Pelto for preparation of materials for publication and display, and provided support for the Dam Decommissioning Task Force and Triage Team. Ann helped to produce the River Restore Fact Sheet and Fishway Stewardship Guide, as well as the Town Brook case study and other publication material.

Legislative Update

Water Conservation Bill

House Bill 4791/Senate Bill 2006 ("AN ACT ESTABLISHING A WATER RESOURCES CONSERVATION AND EFFICIENCY PROGRAM") is currently being considered by the Senate Ways and Means Committee. The purpose of the bill is to enhance the state's ability to promote responsible and efficient water use to help ensure there's enough water available in the future to meet human as well as environmental needs. This bill would provide financial and technical assistance to water suppliers and water users and should lead to substantial efficiency improvements in water use.

These efficiency improvements will enable existing water users to reduce water consumption, thereby helping to ensure the adequacy of existing supplies as well as freeing up water and making it available if needed by new residents and businesses. Of equal or even greater importance, increased efficiencies in water supply delivery and use will enable more water to be retained in the natural environment, where it is critically needed to sustain healthy aquatic and other water-dependent organisms and ecosystems.

H. 4791/S.2006's chief sponsors are Rep. Douglas Petersen (D-Marblehead) and Sen. Bruce Tarr (R-Gloucester). The bill has also garnered a sizable and diverse group of co-sponsors: Rep. Eric Turkington (D- Falmouth); Rep. Anthony Verga (D-Gloucester); Rep. Geraldine Creedon (D- Brockton); Rep. Bradford Hill (R- Ipswich); Rep. Kay Khan (D- Newton); Rep. Ellen Story (D- Amherst); Rep. Theodore Speliotis (D- Danvers); Rep. Antonio Cabral (D- New Bedford); Rep. Mary Jeanette Murray (R- Cohasset); Rep. Christopher Fallon (D- Malden); Rep. Thomas Golden (D- Lowell); Rep. James Miceli (D- Wilmington); Rep. Barry Finegold (D- Andover); Rep. George Rogers (D- New Bedford); Rep. Kathleen Teahan (D- Whitman); Rep. Susan Pope (R- Wayland); Rep. Christine Canavan (D- Brockton);

Sen. David Magnani (D- Framingham); Sen. Susan Fargo (D-Lincoln); Sen. Robert Hedlund (R- Weymouth); Sen. Brian Lees (R- Longmeadow); Sen. Robert Creedon (D- Brockton); Sen. Jo Ann Sprague (R- Walpole); Sen. Henri Rauschenbach (R-Brewster); Sen. Michael Knapik (R- Westfield), and Sen. Richard Tisei (R- Wakefield).

The Massachusetts Audubon Society (MAS) strongly encourages citizens who care about rivers and other water-dependent habitats to contact the Senate Ways and Means Committee [State House, Room 212, Boston 02133; (617) 722-1481] to make their views known on the bill. In the meantime, here is a brief scientific explanation for why it's so important to minimize unnecessary withdrawals and other removals of water from the natural environment:

Withdrawals, diversions and other artificially-induced reductions in water levels in rivers, streams, kettle ponds, wetlands and other hydric ecosystems are capable of causing serious ecological damage, especially during drought periods. Water is an essential component of aquatic and other water-dependent ecosystems such as wetlands. The presence of water in sufficient amounts and periods of time is crucial to the continued survival of many plants and animals in these areas. Removal of water from these areas can cause significant environmental damage, depending upon the time, location and amount of the withdrawal and the sensitivity of the affected areas.

Droughts and other low-water events are especially stressful times for fish and other water-dependent organisms. Most of these species have evolved to withstand a certain level of stress resulting from naturally-occurring drought periods. **Water withdrawals and diversions for water supply or other purposes, however, can significantly increase the duration, frequency and severity of drought conditions.** This artificially-induced drop in water levels may lead to a marked decline in the quality and quantity of habitat for water-dependent species in rivers, streams, wetlands and other hydric ecosystems. Such an impact is likely to result in the demise of sensitive (and often the most ecologically significant) species and a drop in overall species diversity, a key indicator of ecological health. This problem is further aggravated by the fact that new diversions or withdrawal points are often proposed to be located within the shrinking inventory of relatively unspoiled and uncontaminated areas which possess high ecological values and sensitivities.

Wasteful and inefficient water use (for lawn watering, e.g.) can cause serious environmental consequences, especially during droughts and other low-water periods. Yet the environmental cost of water supply withdrawals and/or diversions is largely if not totally avoidable in many situations. Many existing water supply systems suffer from inefficiencies in water delivery and use due to inadequate leak detection, metering, pricing, etc. This results in more water being withdrawn from the natural environment (with resultant adverse ecological impacts) than is truly necessary to meet community needs. Most communities can do a much better job of delivering and using water in an efficient, cost-effective and environmentally responsible manner. This proposed legislation should help effectively persuade communities to turn to increased efficiency of water delivery and use as the first and best means to avoid water shortages.

Existing water withdrawals/diversions are already aggravating levels of environmental degradation caused by low water levels in water-dependent ecosystems. [Many of us have witnessed this first-hand in recent years, when a number of rivers, streams and ponds across the state ceased flowing and/or dried up completely, often in the vicinity of water supply wells.] We must do what we can to identify places and times where existing water withdrawals and diversions are causing significant environmental harm, and then take action to adjust pumping times, rates and locations of withdrawal/diversion points to minimize this impact wherever possible. This legislation should educate water suppliers, communities and the public of the fundamental importance of water and the threats posed by withdrawals and diversions to our ecological well-being. We need to keep in mind that whereas human communities can (and **should**) compensate for water shortages through more efficient use, the needs of natural communities are less flexible.

The Ipswich River watershed was appropriately selected to be the "pilot" watershed for implementing H.4791/S.2006. DFWELE has partnered with DEM in an effort to restore a healthy breeding population of anadromous fish (alewives and river herring) to the Ipswich River. Critical to the success of that effort is keeping enough water in the river to enable the fish to successfully swim upstream from the ocean and find adequate water depths for spawning. Unfortunately, recent years have seen the Ipswich flow backwards and/or dry up completely, often in the vicinity of water supply withdrawal points.

These chronic low flows put anadromous as well as freshwater fish and most other aquatic organisms in the Ipswich under severe and ultimately lethal stress. H.4791/2006's selection of the

Continues

Ipswich watershed as a pilot will enable DEM OWR and others to concentrate their efforts on the many communities obtaining some or all of their public water supply from the Ipswich watershed. Only through achieving additional water conservation measures and efficiency improvements among many of these communities can we ensure that there's enough water to go around to meet the needs of humans as well as the river and its inhabitants.

Last but not least, you may have heard that the National Weather Service's regional office in Taunton recently predicted that Massachusetts is likely to have a drier-than-normal spring and summer, along the lines of what the state experienced last year. Last summer, more than **50** communities (many of which rely on water from the Ipswich watershed) had to declare local water emergencies because existing supplies could not keep pace with demand. The silver lining of this ominous cloud of drought predicted for the Commonwealth is a favorable climate for the Water Conservation Bill and/or other means that better enable communities to effectively reduce consumptive water demand so that existing supplies are adequate.

For more information on the Water Conservation Bill, contact Lou Wagner, MAS, at (781) 259-9500 or <wagnerlj@ix.netcom.com>.

Community Preservation Act (CPA)

As of this date (5/11), the CPA is still before a six-member House/Senate Conference Committee. CPA advocates are still pushing for the bill to emerge from the Conference in good shape and be approved by the full House and Senate and signed by the Governor before the current legislative session ends in July. If that fails to happen, the bill will "die" and will need to be refiled again for consideration in the next legislative session following the election this November. Call the Community Preservation Alliance at (617) 725-0597 for more information.

Environmental Affairs Secretary Bob Durand is promoting the concept of Community Preservation by holding Community Preservation Summits throughout the state. To date, 20 Summits have been held. The intent of EOEA's Community Preservation Initiative is to improve the quality of life in Massachusetts community by community, watershed by watershed. EOEA is helping communities make informed decisions about their future growth by providing municipalities with the information and tools they need to make effective land use changes.

The principle planning tool is a series of buildout maps and accompanying analysis, which show what the community would look like at maximum development based on current state laws and local by-laws. The maps are accompanied by graphs which project such categories as population (residential and school children) and water use. Buildout maps will be completed for all communities by July 1, 2001. For more information and a list of Summit locations, please visit our web site at <http://www.state.ma.us/envir> or call Community Preservation Outreach Coordinator Jamie Hellen at (617) 626-1054.

In related news, On January 21, 2000, Governor Cellucci signed **Executive Order No. 418**, "Assisting Communities in Addressing the Housing Shortage". The purpose of the order is to encourage Massachusetts cities and towns to create "community development plans" that identify locations for new housing opportunities while balancing environmental, transportation and economic development issues and still preserving the unique character of their communities. The Executive Office of Environmental Affairs and the Executive Office of Transportation and Construction (EOTC) and the Department of Housing and Community Development (DHCD) will provide up to $30,000 for each community to create a community development plan which shall include the following core elements:

❖ Location, type and quantity of new housing units, including housing affordable to individuals and families across a broad range of income;

❖ Location, type and quantity of open space to be protected including identification and prioritization of environmentally critical unprotected open space, land critical to sustaining surface and groundwater quality and quantity, and environmental resources;

❖ Location, type and quantity of commercial and industrial economic development, and;

❖ Location and description of any improvements to transportation.

Communities will be eligible to receive assistance in completing community development plans once they have received their buildout map and analysis. Communities may pool their money to produce regional plans. EO 418 is also designed to provide incentives to cities and towns to expand the supply of new housing. DHCD will certify communities that meet certain housing criteria and these communities will be given priority when EOEA, EOTC, DHCD and the Department of Economic Development award discretionary grants. For more information about EO 418, please contact Fred Habib (DHCD) at 727-7765, ext. 407.

Resources & Grants

Grants and Awards

The Conservation Fund, the National Geographic Society, and CF Industries is administering the CF Industries National Watershed Award to recognize community excellence in watershed protection. The award is given to three communities and one corporation who have exemplified outstanding leadership in protecting America's water resources. They focus on innovative, nonregulatory approaches to improving water quality with emphasis placed on local partnerships that demonstrate the success of voluntary initiatives, education, and economic incentives.

Last year's community award recipients were Rappahannock-Rapidan Watershed Partnerships, VA, Sun River Watershed Project, MT, and North Branch of the Chicago River Watershed Project, IL. Recipients of the award will be honored at a ceremony in Washington, DC (travel expenses paid), and will receive a cash award. To be eligible, programs must have been operating for at least one year and must exceed minimum legal requirements or existing regulations. For an application, contact Beth Koonse, The Conservation Fund, at (304) 876-2815. Application deadline is July 28, 2000.

Resources for Global Sustainability [(800) 724-1857, <http://www.environmentalgrants.com>] has recently issued the eighth edition of its best-selling guide entitled **Environmental Grantmaking Foundations**. The guide to over 875 independent, community and corporate foundations provides contact information, foundation history and philosophy, financial data, and sample of grants and the application process. The guide in available in print or CD-ROM, with an on-line directory accessible by mid-summer 2000.

The U.S. Environmental Protection Agency (EPA) has recently issued the second edition of its **Catalog of Federal Funding Sources for Watershed Protection** (EPA 841-B-99-003). This document can be ordered from the National Service Center for Environmental Publications, 800-490-9198, or viewed and/or downloaded from the Web at <http://

www.epa.gov/owow/watershed/wacademy/fund.html>.

The Department of Environmental Protection Drinking Water Program is accepting proposals for its **Wellhead Protection Grant Program**. This program is open to all municipal and non-municipal Community Public Water Systems, and Non Transient Non Community Systems that serve schools. Grants go to projects for developing wellhead protection plans and emergency response plans, inspection, developing outreach and education, and various improvement projects. Proposals are due June 30, 2000. Contact Catherine Sarafinas: 617-556-1070.

Patagonia offers small grants through its **Environmental Grants Program.** They look for proposals from small grassroots activist organizations that are innovative and produce measurable results. They fund action-oriented work that builds public involvement and support and has specific goals and objectives. You can submit your proposals directly to the store in Boston (346 Newbury St., 617-424-1776) or email Jil Zilligen or John Sterling at <jil_zilligan@patagonia.com> or <john_sterling@patagonia.com>. Applications are due April 30 and August 31 of each year. The outdoor equipment supplier

REI Co-op also has several conservation grant programs as well as making in-kind contributions of staff, members and/or materials to conservation activities near its retail locations (two of which are in Massachusetts). Information is available on the Web at <http://www.rei.com/YOUR_COOP/grants/index.html?Pes=HPYourCoop_Grants> or by calling (800) 426-4840.

On-Line Resources

U.S. Geological Survey <http://mapping.usgs.gov/www/gnis/gnisform.html>

This URL will enable you to search for, zoom in/out of and see scanned versions of U.S.G.S. quadrangle maps covering any natural or other geographic feature in the U.S.

<http://ma.water.usgs.gov/basins/>

This is a clickable, interactive map of Massachusetts and Rhode Island watersheds, with information on surface water, bedrock geology, surficial geology, projects in the watershed, on-line publications and links for each watershed.

<http://water.usgs.gov/wsc>

This is the USGS's "Science in Your Watershed" Web page. Here you can find out about s scientific data collected by the USGS and others on your watershed as well as a list of helpful agencies/organizations and the opportunity to ask and receive answers to technical questions from USGS personnel.

<http://ma.water.usgs.gov/streamstats/>

This site provides a GIS interface that allows you to view GIS data layers and statistics about streamflow and basin characteristics. The program allows you to calculate low-flow analysis for selected points along rivers and gives information from stream gages. The data includes drainage area, waterbodies, wetlands, stream length, mean basin slope, basin elevations, and flow duration statistics including floods and low flows. A tutorial is provided to guide you through the application.

Mass. Executive Office of Environmental Affairs (EOEA) <http://www.state.ma.us/envir>

EOEA's recently spiffed-up Web page contains detailed information on Secretary Durand's major policy objectives (Community Preservation, Open Space Protection, Biodiversity, Environmental Education, Pollution Prevention and the Watershed Initiative) as well as links to all EOEA agencies and programs.

Non-government on-line resources

Alliance for a Paving Moratorium <http://www.tidepool.com/alliance>

Led by Jan Lundberg, a scion of the family that produces the Lundberg Letter covering the oil business, APM [(707) 826-7775] is decidedly anti-car and anti-pavement. APM's newsletter, the *Auto-Free Times*, chronicles successful efforts to reclaim streets for bicycles and pedestrians and replace asphalt with gardens and other vegetation.

Coalition for Buzzards Bay (CBB) <http://savebuzzardsbay.org>

The CBB is a membership-supported, nonprofit organization dedicated to the restoration, protection and sustainable use and enjoyment of Buzzards Bay and its surrounding watershed. CBB's Web page features links to its educational programs, its *Baywatchers* water quality monitoring program and the *Bay Lands Center*, a regional land conservation program.

Ecosystem Evaluation

<http://www.ecosystemvaluation.org>

Like it or not, some folks are not convinced of the value of preserving rivers and other natural resources unless it is demonstrated to them in economic terms. This site, developed with funding by two federal agencies, provides a user-friendly explanation of the value of and methodology for conducting economic assessments of ecological functions and values. The site also includes case studies and links to sources of related information.

Maine Rivers <http://www.mainerivers.org>

This site features the latest river news, a calendar of upcoming river-related festivals, training and events, facts and photos on rivers throughout Maine, a directory of watershed organizations and much more.

Mass. Bicycle Coalition (MassBike) <http://www.massbike.org>

MassBike's extensive Web page is an encyclopedic source of information about bicycling, bike clubs, bike paths and routes, throughout the Commonwealth and beyond.

Mass. Land Trust Coalition (MLTC) <http://www2.shore.net/~mltc>

The MLTC's Web page contains information for and about the over 100 private, nonprofit land conservation organizations active in Massachusetts at the local, regional and statewide level. This page can help you find out about land trusts active in your area, land conservation techniques, pending state and federal legislation affecting land conservation, and sources of funds for land conservation. The MLTC also sponsors an annual conference in March that draws hundreds of land conservation enthusiasts.

North American Water Trails, Inc. <http://www.heritageworks.com/nawt.html>

The mission of North American Water Trails is to promote, encourage and support the establishment of recreational waterways on North American interior and coastal waters. It is a coalition of organizations and individuals who are interested in establishing water trails – paddling routes that that combine recreation and conservation. These trails provide small boat access and overnight campsites along the river.

Scenic America <http://www.scenic.org>

Here you will find nomination forms for Scenic America's 2000 Last Chance Landscapes program. These endangered landscapes are places of beauty or distinctive community character with both a pending threat and a potential solution.

Nominations are due on June 15, 2000. A Last Chance Landscape can be a scenic vista, a distinct region, an urban neighbor-

Continues

hood, or some other place people cherish and want to preserve. Scenic America will judge nominations on the scenic quality and/or distinct character of the area, the extent and urgency of the threat, and the opportunities to save the landscape

SprawlWatch Clearinghouse <http://www.sprawlwatch.org>

This site provides information on recent sprawl-related news stories, reports, books and other resources to fight sprawl and promote smart growth.

Toxics Action Center <http://www.toxicsaction.org>

Since 1987, Toxics Action Center has assisted more than 250 neighborhood groups to address toxic pollution in their communities. The Center provides training and consultation to groups to help them develop and implement successful strategies to address point sources of pollution in their campaigns to clean up hazardous waste sites and pressure companies to reduce their use and discharges of toxic chemicals.

Water Conservation, Composting Toilets and Greywater

<http://waterwiser.org>, <http://www.biolet.com>, <http://www.clivusmultrum.com>, <http://www.greywater.com>, <http://www.ecological-engineering.com/ss.html>

These Web pages provide information on various technologies available to reduce water consumption and achieve more efficient water use. The increasing employment of these and related techniques are essential in mitigating the worsening hydrological and resultant ecological stresses on riverine and other water-dependent habitats due to sprawl-induced increases in impervious surfaces and consumptive water demand. The more we can reduce the water consumed and/or prevented from recharging groundwater by existing and new development, the more water we can retain in the natural environment, where it is critically needed to sustain healthy aquatic and other hydric ecosystems.

Water Forum

The Water Forum is a free and open e-mail discussion group of surface water and groundwater resources issues; including drinking water, wetlands, wastewater, irrigation, recreational use, fisheries and wildlife use, environmental and public health issues, and any other relevant water resources topics. The list is moderated by Ken Bannister, founder of *Groundwater-Digest*, currently the world's largest groundwater discussion forum. The Water Forum seeks to broaden the discussions held on Groundwater-Digest to include other areas of interest in the water resources field. A broad range of members from academia, industry, and government as well as wide ranging geographic diversity will provide for an interesting and helpful forum. Your membership is valued and your input is welcomed. To join, simply send a blank e-mail to <waterforum-subscribe@eGroups.com>.

Calendar

The **Tsongas Industrial History Center**, a collaboration of the University of Massachusetts/Lowell and the Lowell National Historical Park, is offering a three-day **teacher institute on groundwater issues** on Tues-Thurs, **June 27 -28**. Teachers will learn about groundwater using groundwater models, computer modeling, will have a session on area geology and hydrology with staff from university earth science department, will visit Brownfield sites to learn about current efforts to rehabilitate industrial sites, and will receive a comprehensive groundwater curriculum. The fee is $100. The program will be held 10 AM-2 PM with an hour orlunch on your own. For more information call Beverly Perna, Ed.D., Museum Education Specialist, Tsongas Industrial Hisotry Center or email to <Beverly_Perna@uml.edu **>.**

Working at a Watershed Level is the title of a five-day training course sponsored by the Council of State Governments (CSG). The course will be held in Bloomington, IN from **Sept. 11-15**. For more information, contact Malissa McAlister at (606) 244-8243, <mcalister@csg.org> or on the Web at <http://www.statesnews.org/ecos/working.htm>. The CSG has also recently published *Getting in Step: A Guide to Effective Outreach in Your Watershed*, which can be ordered by calling (800) 521-3042 or viewed on-line at <http://stars.csg.org/ecos/reports/1999/in_step.pdf>.

Watershed Educators Conference is scheduled to take place on **Saturday, October 14** at the Tsongas Center in Lowell. More information is available by calling (978) 970-5080 or on the Web at <http://www.uml.edu/tsongas>.

International Conference on Ecology and Management of Wood in World Rivers will take place at Oregon State University in Corvallis, OR from **October 23-27**. More info is available at <http://riverwood.orst.edu>.

Books, Newsletters, Reports and Videos

The Rocky Mountain Institute has recently published a report designed to inspire communities to resurrect lost waterways through daylighting. **Daylighting: New Life for Buried Streams**, by Richard Pinkham analyzes the environmental, economic, political and social implications of the practice through case studies of eighteen completed projects and a number of others in the works. The report shows that daylighting can provide multiple benefits – tangible and intangible – for every dollar expended. The report is available from RMI for $19 plus $6.50 shipping and handling. Rocky Mountain Institute, 1739 Snowmass Creek Road, Snowmass CO 81654.

The **Mass. Historic Commission** (MHC) recently published *Preservation through Bylaws and Ordinances: Tools and techniques for preservation used by communities in Massachusetts*. This useful document covers a number of effective land use regulatory tools for resource protection such as open space zoning, overlay zoning, scenic vista protection bylaws and "great estates" bylaws. Each technique is illustrated by a local example where it is already being utilized by one or more Massachusetts cities or towns. For more information, contact Christopher C. Skelly, Director of Local Government Programs, MHC, 220 Morrissey Blvd., Boston, MA 02125, 617-727-5128, <http://www.magnet.state.ma.us/sec/mhc>.

Published by the Environmental Research Foundation, **Rachel's Environment and Health Weekly** [(410) 263-1584; <http://www.rachel.org>] is a newsletter named in honor of Rachel Carson, author of *Silent Spring*, widely given credit as the book that led to the modern environmental movement. The newsletter is primarily aimed at an audience of grassroots community activists seeking to protect their neighborhoods and families from toxic exposures. Presenting complex scientific issues in plain language, **Rachel's Weekly** is also available free via e-mail.

"After the Rain: Urban Runoff" is a new video from Oregon State University that explores the importance of water, the pressures our towns and cities are placing on this precious resource, and ways that

individuals can protect local drinking water supplies. The video costs $19.95. Send your request and check or money order payable to Oregon State University to: Publication Orders, Extension & Experiment Station Communications, Oregon State University, 422 Kerr Administration Building, Corvallis, OR 97331. More information is available on <http://eesc.orst.edu>.

Awareness is growing about the polluting impacts of direct discharges of untreated stormwater to rivers and other waterways. Among the solutions employed for intercepting stormwater before it runs off into streams are constructed wetlands. Cornell University Cooperative Extension has produced a 20-minute videotape entitled **Use of Constructed Wetlands for Stormwater Runoff**. This video illustrates the benefits of constructed wetlands in absorbing stormwater pollutants as well as reducing the "flashiness" of stormwater runoff. The video costs $19.95 (includes s+h) and is available from the Cornell University Resource Center, 7BTP, Ithaca, NY 14850.

Urban Stream Restoration: A Video Tour of Ecological Restoration Techniques with Ann Riley is a video on restoring streams and rivers in urbanized areas. This is a 61 minute documentary tour of six urban stream restoration sites, including background information on how the projects were funded and organized with community involvement, and the history and principles of restoration. The video can be ordered from: <http://www.urbanstreamrestoration.com/>.

The Four Corners Watershed Initiative Report from River Network is available online at <www.rivernetwork.org/fourcorn.htm>. The report is titled "Exploring the Watershed Approach: Critical Dimensions of State-Local Partnerships". The project, titled from the states is covers, Florida, Massachusetts, Washington and California, examines issues, strategies and prospects for the fledgling watershed approach, with an emphasis on the role of citizen-led efforts.

The Environmental Law Institute announces the publication of **The Clean Water Act TMDL Program: Law, Policy, and Implementation** by Oliver Houck. The book begins with a thorough political history of clean water legislation from 1948 through the present, including discussion and analysis of the legislative struggle leading to the Clean Water Act Section 303(d), and its aftermath in Congress. It explores the legal issues around the 303(d) implementation and the EPA's efforts to manage the program. Visit the web site at <www.eli.org > or call 1-800-433-5120.

The Department of Environmental Management (DEM) has recently published **Creating Greenways: A Citizen's Guide**. This guidebook is intended to get people thinking about greenways and to provide interested citizens with the information they will need to initiate and implement community-based greenway and trail projects. To obtain a copy, contact Jennifer Howard at <Jennifer.Howard@state.ma.us> or (413) 586-8706 ext. 18.

Recently published by the American Fisheries Society (AFS), **Aquatic Habitat Assessment: Common Methods**, edited by Mark Bain and Natalie Stevenson, is a comprehensive survey of the most widely-used methods for riverine and other inland aquatic habitat assessment in North America. The 224-page book is available for $33 from the AFS [(412) 741-5700] and is also viewable on-line at <http://www.fisheries.org/publications/bookpdf.aquaticinfo.com>.

The USGS just released a new book that documents the long history of DDT and other pesticides in bed sediment and aquatic biota in streams and rivers across the Nation. **Pesticides in Stream Sediment and Aquatic Biota – Distribution, Trends, and Governing Factors** provides a national, in-depth analysis of the geographic distribution, trends, environmental fate, and potential significance to ecosystems and human health of pesticides in stream sediment and aquatic biota. This is the final volume in the four-volume series, "Pesticides in the Hydrologic System." The first three address pesticides in the atmosphere, in ground water, and in surface waters of the United States. All four volumes are available from CRC Press at 1-800-272-7737. Visit the USGS National Water Quality Assessment Program at <http://water.wr.usgs.gov/pnsp> for more information.

Our Mission

The Mission of the Riverways Programs is to promote the restoration and protection of the ecological integrity of the Commonwealth's rivers and adjacent lands. Recognizing the uniquely important role of rivers in the state's ecology, the Department initiated the Riverways Programs in 1987.

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